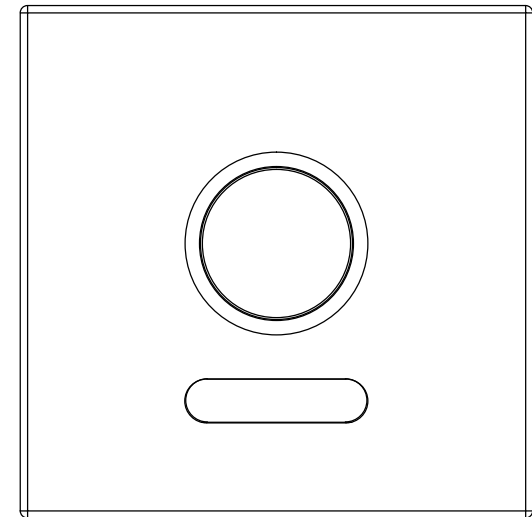




# INSTRUCTION MANUAL


**AFS-202COMK**

**URINAL AUTO FLUSHING SYSTEM**



# SAFETY PRECAUTIONS

The precautions noted within this guide are intended to instruct you in the safe and correct use of the products and to prevent injuries and damage to yourself, other persons and property.

 **WARNINGS** The symbol indicates topics that could lead to death or serious injury if ignored or handled incorrectly.

## **WARNINGS**

**DANGEROUS VOLTAGE INSIDE**

**TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS  
UNIT TO RAIN OR MOISTURE**

## **IMPORTANT**

**PLEASE READ THIS MANUAL AND ENSURE THAT YOU  
UNDERSTAND THEM BEFORE INSTALLING OR OPERATING THE  
PRODUCTS.**

## **DISCLAIMER**

- While every effort has been made to ensure that the information contained in this guide is accurate and complete, no liability can be accepted for any errors or omissions. Rigel reserves the right to change the specifications of the products and function described herein at any time without prior notice.
- No part of this guide may be reproduced, transmitted, transcribed, or translated into any language without prior written permission of Rigel.

## CUSTOMER SERVICES

### AFTER SALES SERVICE

Our Customer Support Team is comprehensively trained to provide help and advice, spare parts or a service visit.

### SPARE PARTS

We maintain an extensive stock of spares and aim to have functional parts available for ten years from the date of final manufacture of the product. Spares can be purchased from approved stockists or merchants (locations on request) or direct from Customer Services Department. Spares direct will normally be dispatched within two working days.

### NOTE

In the interest of safety, spares requiring exposure to mains voltages can only be sent to qualified persons.

### SERVICE

Our Customer Support Team is available to provide a quality service at a reasonable cost. You will be assured of the services of a trained engineer / agent, genuine spares and a 6-month guarantee on the repair.

### CONTACT US

#### RIGEL TECHNOLOGY (S) PTE LTD

No. 12 Kaki Bukit View, Kaki Bukit Techpark II (S) 415948

Tel: (65) 6844 0660 Fax: (65) 6844 0112 E-mail: sales@rigel.com.sg

Office Working Hours: 8:30am - 6.00pm (Monday to Thursday)

8:30am - 5:30pm (Friday)

Website: www.rigel.com.sg

#### RIGEL TECHNOLOGY (M) SDN BHD

Wisma Rigel, 16 & 18, Jalan 3 / 33B, MWE Commercial Park, 6 1/2 Miles, Off

Jalan Kepong, 52000 Kuala Lumpur, Malaysia

Tel: (603) 6258 6016 Fax: (603) 6258 5498 E-mail: sales@rigel.com.my

Office Working Hours: 8:30am - 6.00pm (Monday to Friday)

Website: www.rigel.com.my

#### RIGEL TECHNOLOGY (NINGBO) CO. LTD

No 18, Xingye Road 2, Ningbo Beilun Free Trade East Zone, 315800 Ningbo,

Zhejiang, China

Tel: (86) 574 5626 1688 Fax: (86) 574 5626 1588 E-mail: sales@rigel.com.sg

#### RIGEL CERAMICS (SICHUAN) CO. LTD

Shuanghechang. Anfu Town, Naxi District, 646300 Luzhou City, Sichuan, China

Tel: (86) 830 4270 155 Fax: (86) 830 4270 636 E-mail: sales@rigel.com.sg

## IMPORTANT SAFETY INFORMATION

- 1) Products manufactured in Rigel are safe and without risk provided that they are installed, used and maintained in good working order in accordance with our instructions and recommendations.
- 2) This appliance **MUST** be earthed.
- 3) There are no user serviceable parts in this product, only a competent tradesperson should dismantle the unit to carry out repairs.
- 4) If you suspect any malfunctioning of this unit, switch off the electricity supply and inform your supplier or installer immediately.
- 5) Any person who may have difficulty understanding or operating the controls of the product should be supervised while using the appliance. Particular consideration should be given to the young, the elderly, the infirm or anyone inexperienced in the correct operation of the controls.



**\*\*IMPORTANT\*\***

*There should not be any obstruction within a radius of 80mm around the sensor eye.*

*There also should not have any protrusions of walls, objects or otherwise below the front panel within the 80mm radius, referenced from the plane of the front panel.*

*This is to avoid interruption of the sensor beam coverage to ensure reliable operation.*

# WARRANTY

Rigel Technology (M) Sdn Bhd guarantees products against any defect of materials or workmanship for 1 year from the date of purchase. Within the guarantee period, all defective parts will be repaired and/or replaced free of charge. To be eligible for free repair and/or replacement, any service work on the product in question must only be undertaken by Rigel Technology (M) Sdn Bhd or approved agents. Service under this guarantee does not affect the warranty expiry date. The guarantee on any exchanged parts or products ends when the normal product guarantee period expires.

This warranty applies only to products properly installed and operated within specified environment conditions. This warranty does not extend to washroom accessories or other peripheral items.

### Rigel's responsibility under this warranty does not apply to:

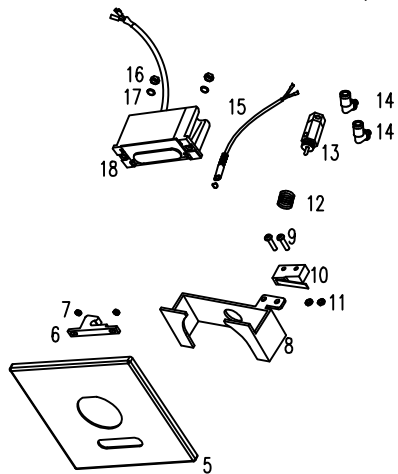
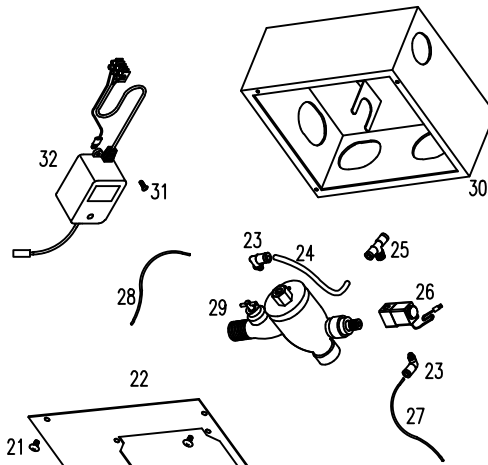
1. Misuse, negligence or accidents
2. Public abuse or vandalism
3. Repairs or alteration of products not authorised by / performed without consulting Rigel
4. Repair or alteration works that do not comply with manufacturer's installation instructions or not using genuine spare parts supplied by Rigel

In additional, Rigel will not be liable for any incidental or consequential damages, including loss of profits or savings that arise out of the use or misuse of the products.

### The terms of this warranty are only valid after:

1. Full payment has been made
2. The official warranty card has been completely and correctly filled out in ink and returned to Rigel within 14 days of purchase. Loss or misplacement of the card and/or amendments done without authorisation will render the warranty null and void.

This warranty is in addition to your statutory and other legal rights.



## AFS-202COMK

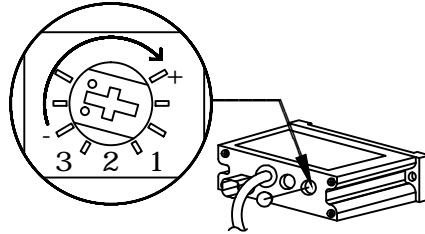
Urinal Sensor Flush Valve  
 (Concealed Duct-Type  
 c/w manual By-Pass and Electrical Override)

# PARTS LIST

## FINE TUNING OF SENSOR UNIT

### SENSING DISTANCE ADJUSTMENT

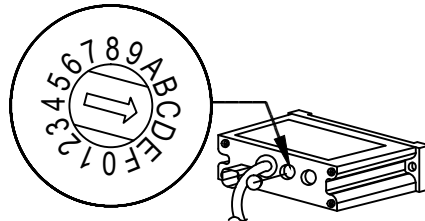
\*\*To increase the sensing distance, turn the trimpot clockwise. To reduce, counterclockwise.



### WATER VOLUME ADJUSTMENT

POSITION      \*FLUSHING TIMING/  
WATER VOLUME

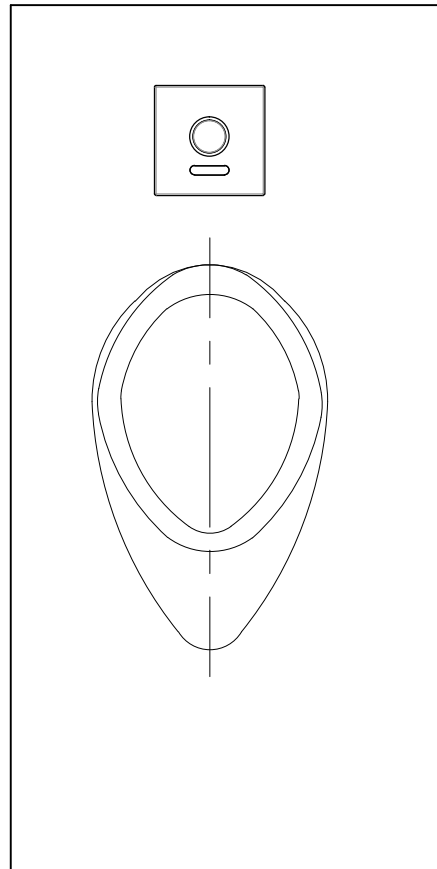
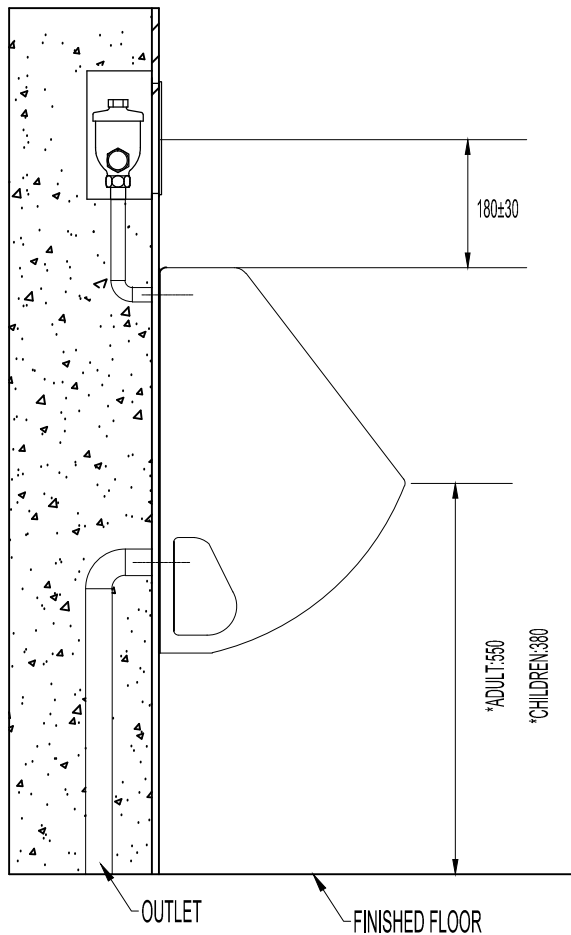
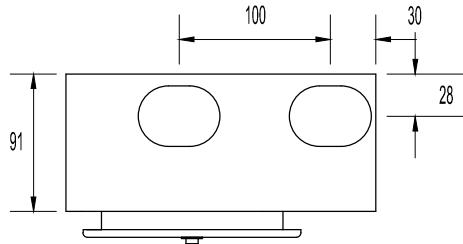
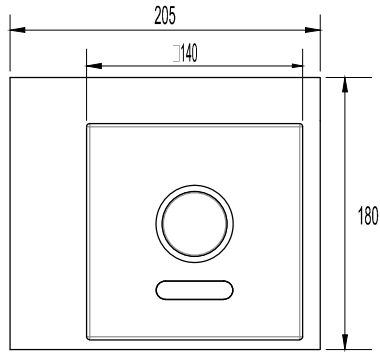
0	1.8 sec
1	2.0 sec
2	2.2 sec
3	2.4 sec
4	3.0 sec
5	3.6 sec
6	4.0 sec
7	Test mode (light blinks non-stop)



#	DESCRIPTION	QTY
1	2MF Button Head	1
2	2MF Button Casing	1
3	2MF Button Coupling	1
4	Direct Trigger Hex Nut M45	1
5	Front Panel(AFS-202COMK)	1
6	Grabber Door Catch	1
7	SS Nut	1
8	Hydraulic Button Bracket for Flat Button	1
9	M2.5x12 Pan Phillips SS Screw	2
10	Microswitch, SS5GL111	1
11	M2.5 SS Nut	2
12	Compression Spring, OD9, ID0.8,L14mm	1
13	Switch Hydraulic, MAV-2-M5	1
14	Elbow, 6mm Tubing, M5 Thread	2
15	Moulded Cable, O-Ring with DS Controller Microswitch	1 SET
16	M3 SS Nut	2
17	M3 Tooth Washer	2
18	DS Sensor Assy	1
19	M4x25 Pan Phillips SS Screw	4
20	Cover Frame	1
21	M4x8 BT Truss HD STS	4
22	Casing Cover	1
23	Elbow, 6mm Tubing, M5 Thread	2
24	4mm PA Tubing (Black) - 34cm	1
25	Tee Branch, 4mm Tubing, 1/8" Thread	1
26	Solenoid Valve 12 Volts	1
27	4mm PA Tubing (Black) - 22cm	1
28	4mm PA Tubing (Yellow) -34cm	1
29	Urinal F/V, T-Handle	1
30	Casing, 205 x 180 x 91mm	1
31	M4x6 Pan Phillips SS Screw	1
32	Power Adaptor Assy, 18V	1
33	Template	1

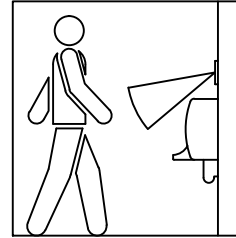
# AFS-202COMK

## DIMENSION

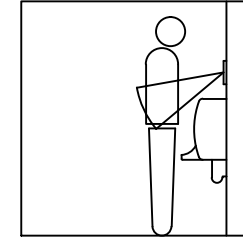


## OPERATING PROCEDURE

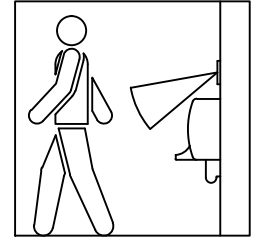
### URINAL SENSOR FLUSHING SYSTEM



1. Time delay of 7 sec feature prevents false operation.



2. System on stand by once a person is detected.



3. Flushing begins when a person moves away.

## GENERAL SPECIFICATIONS

### UR FLUSHING SYSTEMS

DESCRIPTION	URINAL AUTO FLUSHING SYSTEM	
Sensing Distance	400 - 1200mm (adjustable); 600mm (default)	
Time delay before activation of sensor	7 sec.	
Time delay for activation of flush	Immediately	
Discharge time	2.2 sec. (adjustable)	
Discharge Volume	1-4 litres (adjustable)	
Operating Pressure	A/C Operated	1 - 8 kgf/sq cm
	Battery Operated	0.5 - 8 kgf/sq cm
Solenoid Voltage	A/C Operated	DC 12V
	Battery Operated	DC 6V
Power Rating	230V AC 50Hz 6VA or Alkaline battery/ Lithium battery	
Battery specification	Alkaline battery 6V, size AA x 4 / Lithium battery 223 6V	
Battery Life (Urinal)	Approximately 3 yrs based on 4000 flushes/ month	
Output Power	7.5W	

**NOTE** Flush valve is not suitable for acidic water condition.

\*All dimensions are in mm

# TROUBLE SHOOTING GUIDE

AC POWERED - AFS 202 (URINAL)

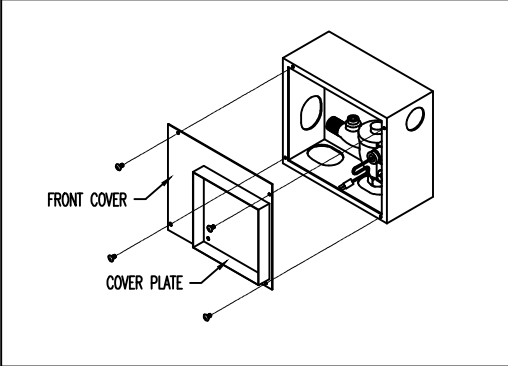
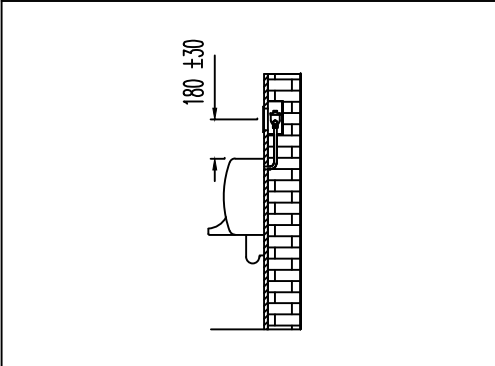
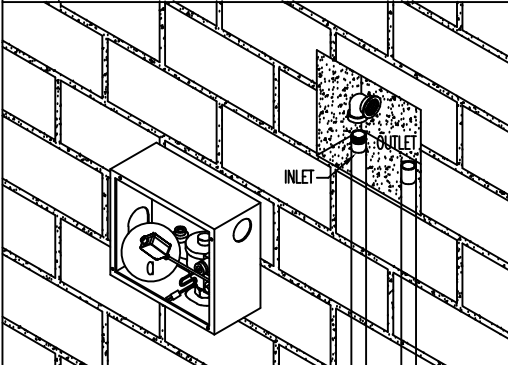
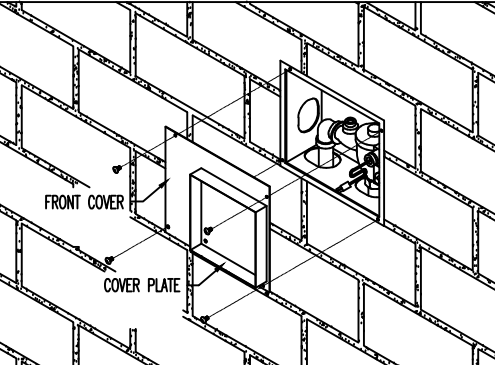
PROBLEM	CAUSE	PHENOMENON	REMEDY
No flush	Inlet blocked; Power supply failure;  Stop valve closed tightly  Sensor is not in stand-by mode  No water supply  Sensor eye unit is defective	No water in pipe; Circuit not working  Person is within the set sensing distance range	Check inlet condition; Check and repair adapter and control circuit;  Check and fully open top valve;  Ensure that the person moves away after yellow light is on. Wait for 5 sec when light changes from steady to blink  Check water supply or ensure that valve stopcock T-handle is open  Replace sensor unit
Sensor light is off	Power supply failure;  Sensing distance is too short; Sensor eye unit is defective		Check AC adaptor, connections, power, outlet and switch; Turn on power or replace AC adaptor  Adjust sensing distance** Replace sensor unit
Manual push button pressed long time, water flushing short time	Microswitch activate;  Hydraulic switch activate;  Direct trigger	Water pressure is not high enough	Adjust discharging timing setting (same as quick stop flushing); Check and clean hydraulic bypass (switch, tubing and fitting); Replace by non-returnable piston or increase water pressure

# INSTALLATION INSTRUCTIONS

(Items shown are illustrations only, and therefore may not reflect actual model supplied)

## AUTOMATIC FLUSHING SYSTEM - URINAL

PLEASE READ THE INSTRUCTIONS CAREFULLY BEFORE DOING ANY INSTALLATION.

1	REMOVE THE COVER PLATE WITH THE FRONT COVER.	2	ENSURE THAT THE DISTANCE BETWEEN THE SENSOR EYE AND THE URINAL PAN IS AS FOLLOWS.
			
3	MOUNT CASING TO THE UNCEMENTED BRICK WALL ENSURING THE CASING IS FLUSH TO THE WALL AND THE POSITION IS UPRIGHT. CONNECT THE INLET (ø25mm) & THE OUTLET (ø32mm) PIPES. CONNECT THE AC WIRE (ø) TO 230V.	4	RE-INSTALL THE COVER PLATE AND THE FRONT COVER.
			

### IMPORTANT NOTE 1:

Tiling height must not be shallower than the top rim of the template / cover plate provided. Rigel will not be held responsible for any non-compliance to this clause.

# INSTALLATION INSTRUCTIONS

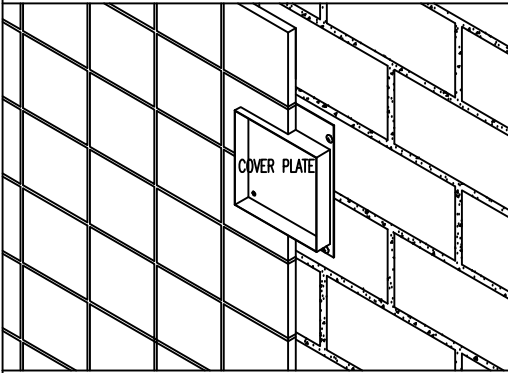
(Items shown are illustrations only, and therefore may not reflect actual model supplied)

## AUTOMATIC FLUSHING SYSTEM - URINAL

PLEASE READ THE INSTRUCTIONS CAREFULLY BEFORE DOING ANY INSTALLATION.

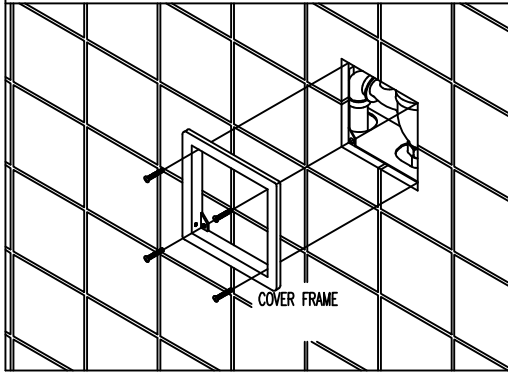
5

APPLY TILES OR GRANITE TO COVER THE BRICK WALL OUTSIDE THE COVER PLATE.



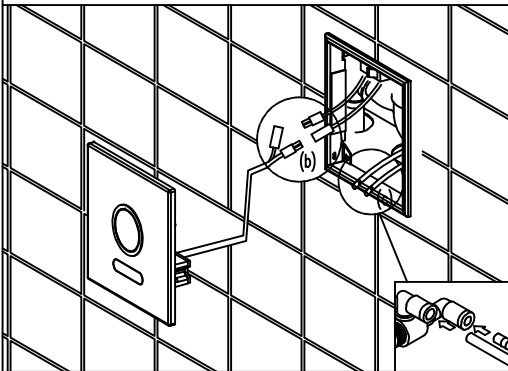
6

REMOVE THE COVER PLATE AND INSTALL THE COVER FRAME USING THE SAME SCREWS.



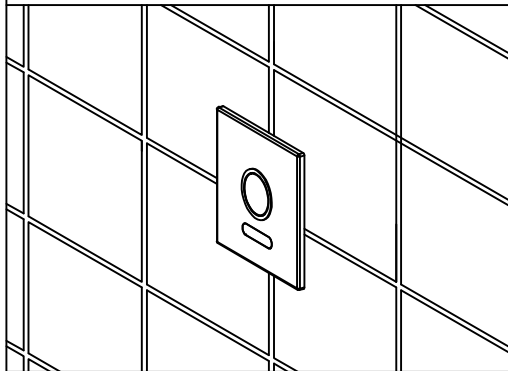
7

CONNECT THE SENSOR CONTROLLER TO THE SOLENOID AND POWER SUPPLY (b). CONNECT THE TUBINGS TO THE HYDRAULIC PUSH BUTTON (c).



10

PUSH THE FRONT PANEL TO LOCK ON THE COVER FRAME. FRONT VIEW OF THE COMPLETED FLUSHING SYSTEM.



### IMPORTANT NOTE 2:

A multipole switch should be fitted between the flushing system and the mains connection, with a breaker point gap of at least 3mm (1/8") & from 15A to 250V.

# TROUBLE SHOOTING GUIDE

AC POWERED - AFS 202 (URINAL)

NORMAL OPERATION			
Red blinking light indicates user detection which stops after 5 blinks. System in standby mode and flushing begins when person is no longer within the set sensing distance range.			
PROBLEM	CAUSE	PHENOMENON	REMEDY
Non-stop discharging	Control circuit failure;	Non-stop and leaking outside	Disconnect circuit from solenoid valve to stop flow; Replace sensor unit; Check discharging volume control*
	Broken tubing or fitting;		Stop water supply by turning the stopcock T-handle clockwise; Replace tubing and fitting; Disassemble valve, check and clean plunger and diaphragm
	Solenoid valve failure; Flush valve failure;	Non-stop and no leaking	Take out piston from flush valve, check and clean especially the filter and orifice. If problem continues, check the rubber parts if no damage, replace piston
	Hydraulic bypass failure		Check hydraulic switch (optional).
Quick stop on flushing	Very high pressure;		Check the dynamic flow pressure; Adjust screw set on top of the flush valve cap
	Control timing is very short		Adjust discharging volume setting;
Slow stop on flushing	Inlet jammed; Stop valve strainer stuck; Dirty piston, stuffed orifice;	Leaking outside	Check inlet; Shut off water from inlet, take out and clean stop valve;
	Broken piston seal ;		Check and replace piston sealing;
	Broken tubing or fitting; Control timing is too long		Check and replace tubing or fitting; Adjust control timing setting